



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/671,326	09/26/2000	Yaqi Cheng	TI-28221	6078
7590 04/20/2004				
Ron Neerings Texas Instruments Incorporated P O Box 655474 M/S 3999 Dallas, TX 75265		EXAMINER TRAN, KHANH C		
		ART UNIT PAPER NUMBER		
		2631		
		DATE MAILED: 04/20/2004 6		

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/671,326

Applicant(s)

CHENG ET AL.

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The Amendment filed on 02/10/2004 has been entered. Claims 1-20 are pending in this Office action.

Response to Arguments

2. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davis U.S. Patent 6,498,806 B1.

Regarding claims 1, 12, and 19, Davis discloses in figure 6 that a first ADSL client modem 214, which is as well known in the art a transceiver for transmitting and receiving data, is connected to another network through a first individual twisted pairs local loop 218, shared ADSL modem-210, and digital interface 200. Other local loops 218 are also connected to the network through

Art Unit: 2631

other individual twisted-pairs local loops 218, shared ADSL modem 210, and digital interface 200.

Davis does not expressly show the first interface and the second interface as claimed in the patent application. However, as appreciated by one of ordinary skill in the art of modem technology, said first ADSL client modem 214 has an embedded interface (not shown in the figure) coupled to said ADSL client transceiver and adapted to couple to a first workstation 216; a second interface (also not shown in the figure) coupled to said ADSL client transceiver, and adapted to couple to the other network through the first twisted-pair local loop 218, which corresponds to a first Master communication loop as claimed.

The claim calls for coupling the second interface through a first Master communication loop and a second shared communication loop adapted to serve a second communications terminal. Referring to figure 6, Davis shows other local loops, each serving other individual workstation 216. Figure 6 also illustrates all local loops multiplexed and adapted to connect to the other network through the shared DSL modem 210, and digital interface 200. Hence, it would have been obvious to one of ordinary skill in the art that Davis configuration would equivalently connect said ADSL client transceiver through said first local loop, a second local loop to said other network as the claim calls for.

Regarding claim 2, as shown in figure 6, other individual workstations 216 are physically located remote from the first communication workstation 216.

Regarding claims 3, 13 and 20, clearly, the first ADSL client modem 214 exchanges communication information in a format compatible with ADSL standards.

Regarding claim 4, as appreciated by one of ordinary skill in the art that the first workstation 216, corresponding to the claimed first communications terminal, exchanges communication information with a second workstation 216 over the first local loop through the shared ADSL modem 210 and to another local loop 218, corresponding to the second shared communication loop in a format compatible with ADSL standards as claimed.

Regarding claim 5, using the same analogous argument as claim 4, the second workstation 216, corresponding to a second communications terminal, is also adapted to exchange communication information over a second local loop 218 in a format compatible with ADSL standards. Furthermore, the first workstation 216, corresponding to the claimed first communications terminal, exchanges communication information with the second workstation 216, corresponding to a second communications terminal, over the first local loop 218, through the shared ADSL modem 210, and to the second local loop 218, corresponding to the second shared communication loop as claimed, while the second workstation 216 exchanges communication information over the second local loop 218.

Art Unit: 2631

Regarding claim 6, using analogous argument as claim 1, the digital interface 200 in figure 6 would be a remote device at a central office (CO) as claimed in the pending application. As discussed in claim 1, all local loops multiplexed and adapted to connect to the other network through the shared DSL modem 210, and digital interface 200. Hence, it would have been obvious to one of ordinary skill in the art that said first ADSL client transceiver would equivalently communicate information over both said first local, and a second local loop with the digital interface 200 as the claim calls for.

Regarding claim 7, Davis further discloses that the shared DSL modem 210 separates bandwidth via Time Division Multiplexing (TDM) between all active clients. Hence, the first workstation 216 is adapted to communicate information over the second local loop 218 through the shared DSL modem 210 using time division multiplexing technique.

Regarding claims 8 and 16, as illustrated for the shared DSL modem in figure 3, the receiving downstream communication information for all local loops is shared through a receiver 34, shared DSL transmitter, and shared DAC. Hence, it would have been obvious to one of ordinary skill in the art that said first ADSL client transceiver would equivalently be adapted to share a second local loop for receiving downstream communication information for the first workstation 216.

Art Unit: 2631

Regarding claims 9 and 17, the rejection of claim 8 addresses the receiving downstream communication information. Referring to figure 3 again, said first ADSL client transceiver would also be adapted to share a second local loop for upstream communication information for said first workstation 216.

Regarding claims 10 and 18, all the local loops in figure 6 are twisted pair local loops.

Regarding claims 11 and 15, utilizing a splitter to separate ADSL communication information from voice information is well known in the art. Figure 6 illustrates optional POTS interface for each analog front end 212. Davis does not expressly show the same option in ADSL client modem 214. However, it would have been obvious for one of ordinary skill in the art that a splitter could be implemented in each ADSL modem client 214 for voice communication.

Regarding claim 14, said claim is rejected using similar argument as claim 6. Furthermore, as appreciated by one of ordinary skill in the art that the multiplexed data stream, corresponding the claimed integrated communication, through the share DSL modem as taught by Davis would have a higher bandwidth than that available over any local loops.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 703-305-2384. The examiner can normally be reached on Tuesday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 703-306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

TESFALDET BOGURE
PRIMARY EXAMINER

